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Anderson

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(54) **CONFINED PLASMA RESONANCE ANTENNA AND PLASMA RESONANCE ANTENNA ARRAY**

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(58) **Field of Search** 343/701

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(57) **ABSTRACT**

A plasma antenna includes a plasma column formed of an ionizable gas. A modulating carrier frequency produces Hertzian dipoles within the plasma that radiate RF energy at the modulating carrier. The antenna, which produces these dipoles, can be short and still produce significant gain when the modulating carrier frequency and the natural resonance frequency of the plasma are substantially equal. Other aspects of the invention include a method to produce such plasma antenna and a product by process embodiment of the plasma antenna.

18 Claims, 3 Drawing Sheets